IN THE CLAIMS:

Please cancel Claims 17, 25 and 36, without prejudice to or disclaimer of the subject matter recited therein. Please amend Claims 1-5, 16-20 and 22-36, as follows.

1. (Currently Amended) An optical low-pass filter comprising:

at least one ~~birefringence~~ birefringent plate ~~which is~~ made of a uniaxial single crystal ~~that causes birefringence of incoming rays and has~~ having a refractive index difference of not less than 0.02 for ordinary and extraordinary rays,

wherein said filter satisfies ~~at least~~ one of:

$10° < \theta < 27°$ ...(1)

$61° < \theta < 80°$ ...(2)

where θ is the angle an optic axis of said at least one ~~birefringence~~ birefringent plate makes with a normal to a surface of said at least one ~~birefringence~~ birefringent plate.

2. (Currently Amended) A filter according to claim 1, wherein said at least one ~~birefringence~~ birefringent plate is made of lithium niobate.

3. (Currently Amended) A filter according to claim 1, ~~further comprising~~ wherein said at least one birefringent plate comprises:

a first ~~birefringence~~ birefringent plate made of a uniaxial single crystal; and

a second ~~birefringence~~ birefringent plate made of a uniaxial single crystal,

wherein an orthogonal projection of an optic axis of said first ~~birefringence~~ birefringent plate onto an entrance or exit surface of said filter and an orthogonal projection

of an optic axis of said second ~~birefringence~~ birefringent plate onto the entrance or exit surface point ~~to~~ in different directions.

4. (Currently Amended) A filter according to claim 3, wherein the orthogonal projection of the optic axis of said first ~~birefringence~~ birefringent plate onto the entrance or exit surface and the orthogonal projection of the optic axis of said second ~~birefringence~~ birefringent plate onto the entrance or exit surface make a substantially 45° angle.

5. (Currently Amended) A filter according to claim 1, further comprising:

a plurality of plane-parallel plates including said at least one ~~birefringence~~ birefringent plate,

wherein when said plurality of plane-parallel plates are adhered via an adhesive, a dielectric thin film having an anti-reflection effect of rays in a visible wavelength range at an interface between the adhesive and said ~~birefringence~~ birefringent plate is added to the surface of said ~~birefringence~~ birefringent plate.

6. (Original) An image sensing unit comprising:

an image sensing element; and

an optical low-pass filter of claim 1, which is inserted in an optical path of photographing light guided to said image sensing element, and causes birefringence of the photographing light.

7. (Original) A unit according to claim 6, wherein said image sensing element and said optical low-pass filter are integrated.

8. (Original) A unit according to claim 6, wherein said optical low-pass filter unit is adhered to a front surface of a package that encapsulates said image sensing element.

9. (Original) A unit according to claim 6, wherein said optical low-pass filter is adhered to a front surface of a board on which said image sensing element is mounted and encapsulates said image sensing element.

10. (Original) A unit according to claim 6, wherein said optical low-pass filter is directly adhered to said image sensing element.

11. (Currently Amended) A unit according to claim 6, wherein said image sensing element has a rectangular image sensing surface, and

an orthogonal projection of an optic axis of one of said at least one ~~birefringence~~ birefringent plate onto an entrance or exit surface of said filter is substantially parallel to a long side of the image sensing surface.

12. (Currently Amended) A unit according to claim 6, wherein said at least one birefringent plate of said optical low-pass filter comprises:

a first ~~birefringence~~ birefringent plate made of a uniaxial single crystal; and

a second ~~birefringence~~ birefringent plate made of a uniaxial single crystal,

wherein an orthogonal projection of an optic axis of said first ~~birefringence~~ birefringent plate onto an entrance or exit surface of the ~~birefringence~~ birefringent plate and an orthogonal projection of an optic axis of said second ~~birefringence~~ birefringent plate onto the entrance or exit surface of the ~~birefringence~~ birefringent plate make a substantially 45° angle.

13. (Currently Amended) A unit according to claim 12, wherein said image sensing element has a rectangular image sensing surface, and

the orthogonal projection of the optic axis of said first ~~birefringence~~ birefringent plate onto the entrance or exit surface of the ~~birefringence~~ birefringent plate is substantially parallel to a long side of the image sensing surface, and the orthogonal projection of the optic axis of said second ~~birefringence~~ birefringent plate onto the entrance or exit surface of the ~~birefringence~~ birefringent plate makes a substantially 45° angle with the long side of the image sensing surface.

14. (Original) An image sensing apparatus comprising:

an image sensing unit of claim 6; and

an image sensing optical system for guiding photographing light to said image sensing unit.

15. (Original) An apparatus according to claim 14, further comprising a detachable mount.

16. (Currently Amended) An image sensing unit comprising:

an image sensing element having a rectangular image sensing surface; and

at least one ~~birefringence~~ birefringent plate which is inserted in an optical path of photographing light guided to said image sensing element, ~~is~~ made of a uniaxial single crystal ~~that causes birefringence of incoming rays, and has~~ having a refractive index difference of not less than 0.02 for ordinary and extraordinary rays,

wherein said unit satisfies:

$$0.015 < p/d < 0.045 \quad \text{...(3)}$$

where d is the thickness of said at least one ~~birefringence~~ birefringent plate, and p is the pixel pitch of the image sensing surface in a long side direction, and

wherein said unit satisfies one of:

$$10° < \theta < 27° \quad \text{...(1)}$$

$$61° < \theta < 80° \quad \text{...(2)}$$

where θ is the angle an optic axis of the uniaxial single crystal of said at least one birefringent plate makes with a normal to a surface of said at least one birefringent plate.

17. (Canceled)

18. (Currently Amended) A unit according to claim 16, ~~further comprising~~ wherein said at least one birefringent plate comprises:

a first ~~birefringence~~ birefringent plate made of a uniaxial single crystal; and

a second ~~birefringence~~ birefringent plate made of a uniaxial single crystal,

wherein an orthogonal projection of an optic axis of said first ~~birefringence~~ birefringent plate onto an entrance or exit surface of said unit and an orthogonal projection of an optic axis of said second ~~birefringence~~ birefringent plate onto the entrance or exit surface of said unit make a substantially 45° angle.

19. (Currently Amended) A unit according to claim 18, wherein the orthogonal projection of the optic axis of said first ~~birefringence~~ birefringent plate onto the entrance or exit surface is substantially parallel to a long side of the image sensing surface, and the orthogonal projection of the optic axis of said second ~~birefringence~~ birefringent plate onto the entrance or exit surface makes a substantially 45° angle with the long side direction of the image sensing surface.

20. (Currently Amended) A unit according to claim 16, wherein the uniaxial single crystal of said ~~birefringence~~ birefringent plate is a single crystal of lithium niobate.

21. (Original) An image sensing apparatus comprising:

an image sensing unit of claim 16; and

an image sensing optical system for guiding photographing light from an object to said image sensing unit.

22. (Currently Amended) An optical low-pass filter comprising:

a first ~~birefringence~~ birefringent plate made of a single crystal of lithium niobate; and

a second ~~birefringence~~ birefringent plate made of a single crystal of lithium niobate,

wherein an orthogonal projection of an optic axis of said first ~~birefringence~~ birefringent plate onto an entrance or exit surface of said filter and an orthogonal projection of an optic axis of said second ~~birefringence~~ birefringent plate onto the entrance or exit surface of said filter point ~~to~~ in different directions, and all the ~~birefringence~~ birefringent plates of said optical low-pass filter are made of a single crystal of lithium niobate, and

wherein said filter satisfies one of:

$10° < \theta o < 27°$

$61° < \theta o < 80°$

where θo is the angle an optic axis of at least one of said first and second birefringent plates makes with a normal to an entrance or exit surface of the birefringent plate.

23. (Currently Amended) A filter according to claim 22, wherein the orthogonal projection of the optic axis of said first ~~birefringence~~ birefringent plate onto the entrance or exit surface and the orthogonal projection of the optic axis of said second ~~birefringence~~ birefringent plate onto the entrance or exit surface make a substantially 45° angle.

24. (Currently Amended) A filter according to claim 22, wherein when said first and second ~~birefringence~~ birefringent plates are adhered, a dielectric thin film having an anti-reflection effect of rays in a visible wavelength range at an interface between the adhesive and each ~~birefringence~~ birefringent plate is added to a surface of the ~~birefringence~~ birefringent plate.

25. (Canceled)

26. (Currently Amended) A filter according to claim 22, further comprising:

a third ~~birefringence~~ birefringent plate made of a single crystal of lithium niobate,

wherein the orthogonal projection of the optic axis of said first ~~birefringence~~ birefringent plate onto the entrance or exit surface and the orthogonal projection of the optic axis of said second ~~birefringence~~ birefringent plate onto the entrance or exit surface make substantially 45°, and the orthogonal projection of the optic axis of said first ~~birefringence~~ birefringent plate onto the entrance or exit surface and an orthogonal projection of an optic axis of said third ~~birefringence~~ birefringent plate onto the entrance or exit surface make substantially 90°.

27. (Currently Amended) A filter according to claim 26, wherein said first, second, and third ~~birefringence~~ birefringent plates are arranged in turn from a light entrance side, and said filter satisfies:

$$D1 \cong D3 > 2$$

where D1, D2, and D3 are respectively the separation distances of said first, second, and third ~~birefringence~~ birefringent plates at exit surfaces thereof.

28. (Currently Amended) A filter according to claim 27, wherein said filter satisfies one of:

$$10° < \theta 2 < 27°$$

$$61° < \theta 2 < 80°$$

where $\theta 2$ is the angle the optic axis of said second ~~birefringence~~ birefringent plate makes with a normal to an entrance or exit surface of a plane-parallel plate.

29. (Currently Amended) An image sensing unit comprising:

an image sensing element; and

an optical low-pass filter of claim 22, which is inserted in an optical path of photographing light guided to said image sensing element~~, and causes birefringence of the photographing light~~.

30. (Currently Amended) A unit according to claim 29, wherein said image sensing element has a rectangular image sensing surface, and an orthogonal projection of an optic axis of one of the plurality of ~~birefringence~~ birefringent plates onto an entrance or exit surface is substantially parallel to a long side of the image sensing surface.

31. (Currently Amended) A unit according to claim 29, wherein an orthogonal projection of an optic axis of said first ~~birefringence~~ birefringent plate onto an entrance or exit surface and an orthogonal projection of an optic axis of said second ~~birefringence~~ birefringent plate onto the entrance or exit surface make a substantially 45° angle.

32. (Currently Amended) A unit according to claim 31, wherein said image sensing element has a rectangular image sensing surface, and an optic axis of one of said first and second ~~birefringence~~ birefringent plates is substantially parallel to a long side of the image sensing surface.

33. (Currently Amended) A unit according to claim 32, wherein ~~further comprising:~~

~~a first birefringence plate in which~~ an orthogonal projection of an optic axis of a single crystal of the first birefringent plate makes an angle of substantially 45° with a long side direction of the image sensing surface; and

said unit further comprising a third ~~birefringence~~ birefringent plate made of a single crystal of lithium niobate, wherein the orthogonal projection of the optic axis of said first ~~birefringence~~ birefringent plate onto the entrance or exit surface and the orthogonal projection of the optic axis of said second ~~birefringence~~ birefringent plate onto the entrance or exit surface make substantially 45°, and the orthogonal projection of the optic axis of said first ~~birefringence~~ birefringent plate onto the entrance or exit surface and

an orthogonal projection of an optic axis of said third ~~birefringence~~ birefringent plate onto the entrance or exit surface make substantially 90°.

34. (Currently Amended) A unit according to claim 33, wherein said unit satisfies:

$$D1 \cong D3 > 2$$

where Dl, D2, and D3 are respectively the separation distances of the first, second, and third ~~birefringence~~ birefringent plates at exit surfaces thereof.

35. (Currently Amended) A unit according to claim 34, wherein said first, second, and third ~~birefringence~~ birefringent plates are arranged in turn from a light entrance side, and said unit satisfies one of:

$$10° < \theta 2 < 27°$$

$$61° < \theta 2 < 80°$$

where $\theta 2$ is the angle the optic axis of said second ~~birefringence~~ birefringent plate makes with a normal to an entrance or exit surface of a plane-parallel plate.

36. (Canceled)

37. (Original) A unit according to claim 29, wherein said image sensing element and said optical low-pass filter are integrated.

38. (Original) A unit according to claim 29, wherein said optical low-pass filter unit are adhered to a front surface of a package that encapsulates said image sensing element.

39. (Original) A unit according to claim 29, wherein said optical low-pass filter is adhered to a front surface of a board on which said image sensing element is mounted and encapsulates said image sensing element.

40. (Original) A unit according to claim 29, wherein said optical low-pass filter is directly adhered to said image sensing element.

41. (Original) An image sensing apparatus comprising:

an image sensing unit of claim 29; and

an image sensing optical system for guiding photographing light from an object to said image sensing unit.